

**THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

LIONRA TECHNOLOGIES LIMITED,	§	
	§	
	§	
v.	§	CASE NO. 2:22-CV-322-JRG-RSP
	§	(LEAD CASE)
FORTINET, INC.	§	
	§	
	§	

**SUPPLEMENTAL CLAIM CONSTRUCTION ORDER**

On November 17, 2023, the Court held a hearing to determine the proper construction of disputed terms in United States Patents No. 7,302,708, 7,685,436, 8,566,612, 7,916,630, and 7,921,323. On November 27, 2023, the Court entered a claim construction order construing the disputed terms. (Dkt. No. 162.) Now, Fortinet moves the Court for supplemental claim construction based on certain statements made by Lionra in a recent hearing before the PTAB. (Dkt. No. 603.)

**I. BACKGROUND**

Plaintiff alleges infringement of United States Patents No. 7,302,708 (“the ’708 Patent”), 7,685,436 (“the ’436 Patent”), 8,566,612 (“the ’612 Patent”), 7,916,630 (“the ’630 Patent”), and 7,921,323 (“the ’323 Patent”). Dkt. No. 1, Exs. 1–5; Dkt. No. 53, Ex. 1.

The ’612 Patent is a continuation of the ’436 Patent.

**II. LEGAL PRINCIPLES**

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Claim construction is clearly an issue of law for the court to decide. *Markman v.*

*Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). “In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva*, 135 S. Ct. at 841 (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See Phillips*, 415 F.3d at 1313; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *accord Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term’s context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can aid in determining the claim’s meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For

example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); accord *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor’s lexicography governs. *Id.* The specification may also resolve the meaning of ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex*, 299 F.3d at 1325. But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); accord *Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc. v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). “[T]he prosecution history (or file wrapper) limits the interpretation of claims so as to exclude any interpretation that

may have been disclaimed or disavowed during prosecution in order to obtain claim allowance.” *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (citations and internal quotation marks omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 134 S. Ct. 2120. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

### III. DISPUTED TERM IN U.S. PATENTS NO. 7,685,436 AND 8,566,612

The '436 Patent, titled "System and Method for a Secure I/O Interface," issued on March 23, 2010, and bears an earliest priority date of October 2, 2003. The Abstract of the '436 Patent states:

A security processor performs all or substantially all security and network processing to provide a secure I/O interface system to protect computing hardware from unauthorized access or attack. The security processor sends and receives all incoming and outgoing data packets for a host device and includes a packet engine, coupled to a local data bus, to process the incoming and outgoing packets. The processor further comprises a cryptographic core coupled to the packet engine to provide encryption and decryption processing for packets processed by the packet engine. The packet engine also handles classification processing for the incoming and outgoing packets. A modulo engine may be coupled to the local data bus.

**1. "substantially all of the incoming and outgoing packets to the security processor transit one of the plurality of packet engines"**

<p><b>"substantially all of the incoming and outgoing packets to the security processor transit one of the plurality of packet engines"</b>  ('436 Patent, Claims 1, 13;  '612 Patent, Claims 1, 13)</p>	
<b>Plaintiff's Proposed Construction</b>	<b>Fortinet's Proposed Construction</b>
No construction necessary. Plain and ordinary meaning. Not indefinite.	"all of the incoming and outgoing packets to the security processor (including control packets, management packets, and administrative packets) must enter one of the plurality of packet engines, except for packets dropped due to errors."

Dkt. No. 139, Ex. B at 10; Dkt. No. 149, Ex. A at 14.

The Parties previously disputed the construction of this "substantially all..." term with Lionra arguing it should be given its plain meaning and the Defendants arguing the term is indefinite. The Court construed the term to have its plain meaning and that it was not indefinite.

(1) The Parties' Positions

Fortinet argues Lionra's arguments to the PTAB in the parallel IPR proceeding amount to a disclaimer of the "substantially all..." term. Fortinet cites various statements made by Lionra's counsel in response to questions by the PTAB judges regarding this limitation and the alleged prior art disclosure of it. Dkt. No. 603 at 5-7. Fortinet contends that under *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1363-64 (Fed. Cir. 2017) such oral arguments before the PTAB can act as disclaimer even in isolation. Fortinet argues such is the case here where Lionra "made repeated, unambiguous statements to the PTAB that all packets must enter an alleged 'packet engine' to satisfy the 'substantially all' claim requirement." Fortinet contends such statements, made in response to the "Pham" references, where Lionra was asked whether the patents cover a situation where all packets are not sent to, or bypass, the packet engine. Fortinet contends Lionra unambiguously answered that it was a key limitation, added to obtain allowance, that substantially all of the packets transit the packet engine, and Pham does not teach that.

Lionra responds that Fortinet waived this argument since it is essentially based on Lionra's position in the IPR as disclosed in its Patent Owner Response in January.<sup>1</sup> Substantively, Lionra argues the patents do not reference any of the categories of packets in Fortinet's construction and there is no disclaimer necessitating that packets to the security process must enter one of the plurality of packet engines. Lionra also argues that the "dropped due to errors" language contradicts the patent's teaching that packet engines might drop packets for any number of reasons. Lionra contends Fortinet is merely again attempting to reinterpret "transit" which the Court has already found does not require that every packet passes through the packet engines. Lionra also argues that there is no

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<sup>1</sup> As the Court finds there is no disclaimer from the statements made by Lionra's counsel at the oral arguments, the Court does not address if the same or similar argument was available to Fortinet based on Lionra's Patent Owner Response.

“clear and unmistakable” disclaimer because Lionra’s statements were tied to the architecture disclosed by Pham and were at best ambiguous.

## (2) Analysis

Claim 1 of the ’436 Patent, for example, recites (emphasis added):

1. A security processor to process incoming packets and outgoing packets, the security processor comprising:

a switching system to send the outgoing packets and receive the incoming packets;

a packet engine, coupled to the switching system, to handle classification processing for the incoming packets received by the packet engine from the switching system and the outgoing packets sent by the packet engine to the switching system, wherein the packet engine is one of a plurality of packet engines and *substantially all of the incoming packets and outgoing packets to the security processor transit one of the plurality of packet engines*, and wherein the incoming packets and outgoing packets are provided with a tag upon ingress to one of the plurality of packet engines and the tag determines an egress path within the security processor upon exit from a corresponding cryptographic core;

a cryptographic core, coupled to the packet engine and receiving the incoming packets from the switching system via the packet engine and communicating the outgoing packets to the switching system via the packet engine, to provide encryption and decryption processing for packets received from and sent to the packet engine, wherein the packet engine is interposed between the switching system and the cryptographic core;

a signature database; and

an intrusion detection system coupled between the cryptographic core and the packet engine and responsive to at least one packet matching a signature stored in the signature database.

The specification discloses:

Security processing system 102 may be coupled to internal network 116 by I/O interface 114 and to external network 120 by I/O interface 118. Interfaces 114 and 118 may perform physical (PHY) layer processing to convert a digital bit stream to or from an analog or photonic signal for transmission over a physical medium such as, for example, copper wire pairs, co-axial cable, fiber or air. Interfaces 114 and 118 are, for example, streaming data interfaces such as a Packet-Over-SONET Physical-Layer Three (POS/PHY3) type streaming interface, although 10/100 megabit (Mb) Ethernet, 1 Gigabit (Gb) Ethernet, UTOPIA, LX SPI-4 and other interface types may be suitable. By routing *all or substantially all* I/O to and from host processor 130 and/or internal network 116 through security processing system 102, host processor 130 and internal network 116 are *substantially protected* against unauthorized access or other security breaches, protecting the

security information integrity, and providing processing and storage efficiency from information consolidation.

'436 Patent at 4:29–47 (emphasis added).

The specification also discloses that packet engines may perform various operations including potentially “dropping the packet”:

In one embodiment, all incoming packets to security processor 104 may be initially processed by one of packet engines 228. Each packet engine 228 may classify the packet based upon a lookup table result and then may apply a variety of operations including, for example, forwarding with necessary transform parameters to cryptographic core 232, or forwarding to control processor 212 for application level processing. Such operations may further include overwriting portions of the packet with new data such as, for example, the media access control (MAC) header for forwarding and the IP header for NAT, and may also include *dropping the packet*, or passing the packet through security processor 104 to an egress interface, such as, for example, streaming interface 200, unchanged.

*Id.* at 11:9–22 (emphasis added).

The Court previously found that the claims recite “transit,” not “transit to,” and rejected Defendants’ interpretation that the “transit” limitation refers to packets merely arriving at the packet engines. The claims require that the packet engines *operate on* “the incoming packets,” meaning all of them, and the “substantially all . . .” limitation expresses that not every packet *passes through* the packet engines.

The arguments of Lionra’s counsel, that the Pham reference at issue in IPR does not meet the “substantially all” limitation because, in Pham, various types of packets (such as control packets, administrative packets, and management packets) do not enter one of the packet engines, do not constitute a “clear and unmistakable” disclaimer. Distinguishing Pham in this way did not require interpreting the “substantially all” term such that all control packets, management packets, and administrative packets must enter one of the packet engines. Instead,



Lionra's arguments (and Fortinet's motion) are consistent with the existence of factual disputes regarding whether Pham meets the “substantially all” limitation.

Further, Fortinet's proposed construction would reinterpret “substantially” as being limited to the possibility of packets being dropped due to errors. This would be inconsistent with the Court's claim construction analysis, which noted that “[t]he word ‘substantially’ is . . . used to allow for being less than ‘perfect.’” Dkt. No. 162 at 34. The Court did not limit this lack of perfection to allowing for packets dropped due to errors, because such a limitation is not supported by the specification. Here, it does not appear to be squarely addressed by any of the cited statements by Lionra’s counsel. As such, the Court does not find that there can be any “clear and unmistakable” disclaimer on this point.

In sum, the oral arguments cited by Fortinet do not support the construction now proposed by Fortinet, let alone set forth any clear and unmistakable disclaimer or definition for the “substantially all” term.

The Court therefore hereby construes **“substantially all of the incoming and outgoing packets to the security processor transit one of the plurality of packet engines”** to have its plain meaning.

#### IV. CONCLUSION

The Court adopts the construction set forth in this opinion for the disputed term of the patent-in-suit.

The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by

the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

**SIGNED this 30th day of August, 2024.**

  
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ROY S. PAYNE  
UNITED STATES MAGISTRATE JUDGE